

Claims:

- [0047] 1. A kit for use in forming a dome structure, comprising
- [0048] a. a compression ring,
- [0049] b. a plurality of components that are configured to be assembled into a lower ring that is larger than the compression ring and configured to be located below and in spaced relation to the compression ring,
- [0050] c. a plurality of ribs that are configured to be connected with and to extend between the lower ring and the compression ring, the ribs each having a predetermined shape such that when connected with and extending between the lower ring and the compression ring, provide a structural system with a dome shaped appearance, and
- [0051] d. hardware components for use in assembling the foregoing components.
- [0052] 2. A kit as defined in claim 1, wherein the components configured to be assembled into a lower ring comprise lower ring sections, each of which includes inner and outer ring parts joined together at predetermined locations, and splice components for use in joining lower ring sections to each other to form a lower ring with inner and outer ring parts.
- [0053] 3. A kit as defined in claim 2, wherein the compression ring includes rib mounting flanges at predetermined locations on the compression ring, the rib mounting flanges being located and configured such that a rib mounting flange can be received by a slot in a rib.
- [0054] 4. A kit as defined in claim 3, wherein a plurality of rib support members are fixed to the ring sections at predetermined locations such that when the lower ring is assembled each rib support member can be aligned with a respective rib mounting flange of the compression ring, whereby a rib supported on a rib support member is oriented so that a slot in the rib can conveniently receive the respective aligned rib mounting flange of the compression ring.
- [0055] 5. A kit as defined in claim 4, wherein the rib support members comprise angle members fixed to portions of the lower ring sections.

- [0056] 6. A kit as defined in claim 5, wherein the compression ring is formed of metal, the ring sections are formed of metal, and the ribs are formed of wood.
- [0057] 7. A dome shaped structural system comprising
- [0058] a. a compression ring,
- [0059] b. a lower ring that is larger than the compression ring and spaced below the compression ring, and
- [0060] c. a plurality of ribs connected with the compression ring and the lower ring, the compression ring, lower ring and connected ribs forming a structural system with a dome shaped appearance.
- [0061] 8. A dome shaped structural system as defined in claim 7, wherein the ribs are formed of wood and have spaces between adjacent ribs, so that mechanical, electrical and/or lighting components can be located in those spaces, and, if desired conveniently connected to the ribs.
- [0062] 9. A method of forming a dome shaped structural system, comprising the steps of
- [0063] a. providing a compression ring,
- [0064] b. providing a lower ring with a larger but similar shape to the compression ring,
- [0065] c. providing a plurality of ribs configured to extend between the lower ring and the compression ring,
- [0066] d. positioning the compression ring in relation to the lower ring such that the compression ring is above the lower ring and in centered relation to the lower ring, and
- [0067] e. connecting the ribs with the lower ring and the compression ring to form a dome shaped structural system.
- [0068] 10. A method as defined in claim 9, wherein the compression ring has a plurality of rib mounting flanges, the lower ring has a plurality of rib support members, and the ends of the ribs that are configured to be connected with the compression ring have slots, each of which is configured to receive a respective rib mounting flange, and wherein as the ribs are being connected with the lower ring and the compression ring each rib is positioned with the end of the rib that is opposite to the slot

resting on a rib support member and the slot receiving a respective rib mounting flange.

- [0069] 11. A method as defined in claim 10, wherein the step of providing the lower ring comprises providing a plurality of lower ring sections, each of which includes inner and outer ring parts joined together at predetermined locations, and joining the lower ring sections together to form the lower ring.